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SHARE: Building a Panel Survey on Health, Aging and Retirement in Europe

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ABSTRACT

Ageing is one of the largest social and economic challenges of the 21st century in Europe. SHARE, a EU-sponsored project that will build up a Survey of Health, Aging and Retirement in Europe, will be a fundamental resource for science and public policy to help mastering this unprecedented challenge. The main aim of SHARE is to create a pan-European inter-disciplinary panel data set covering persons aged 50 and over. The project brings together many disciplines, including demography, economics, epidemiology, psychology, sociology and statistics. Scientists from some 15 countries work on feasibility studies, experiments, and instrument development, culminating in a survey of about 22.000 individuals. The multidisciplinary nature of the data will provide new insights in the complex interactions between economic, health, psychological and social factors determining the quality of life of the elderly.

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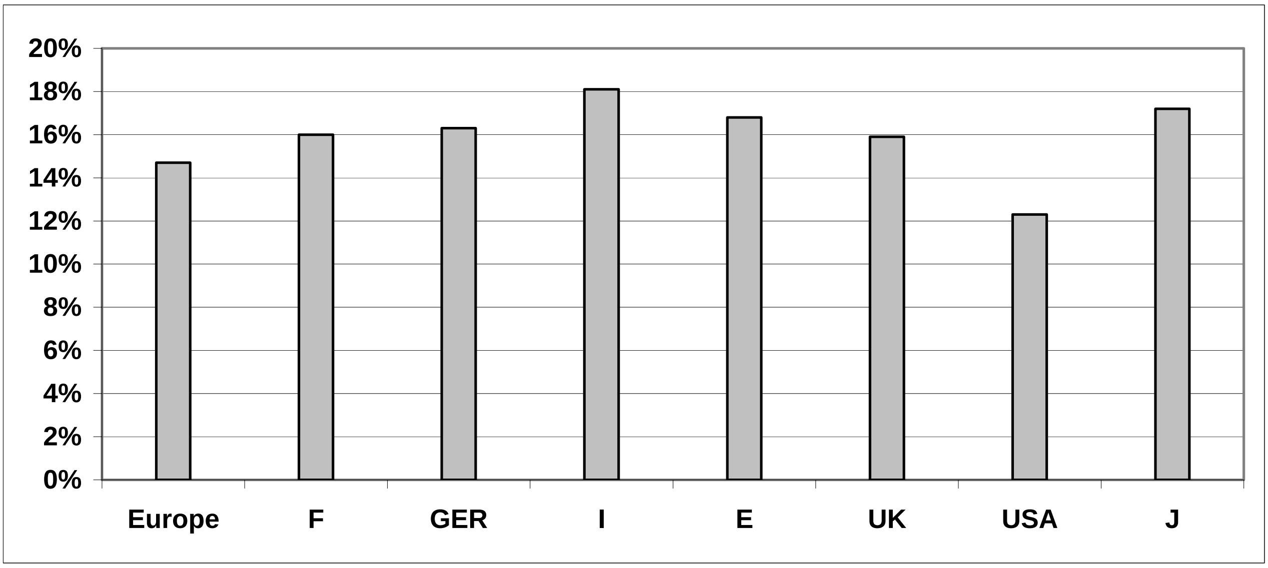
1. Introduction

The purpose of the paper is to present SHARE and its accompanying projects. We detail objectives, milestones, deliverables and current status. A special focus is the description of the cross-national and interdisciplinary nature of the project which introduces considerable complexity in light of the many different options and restrictions in the participating countries.

Background

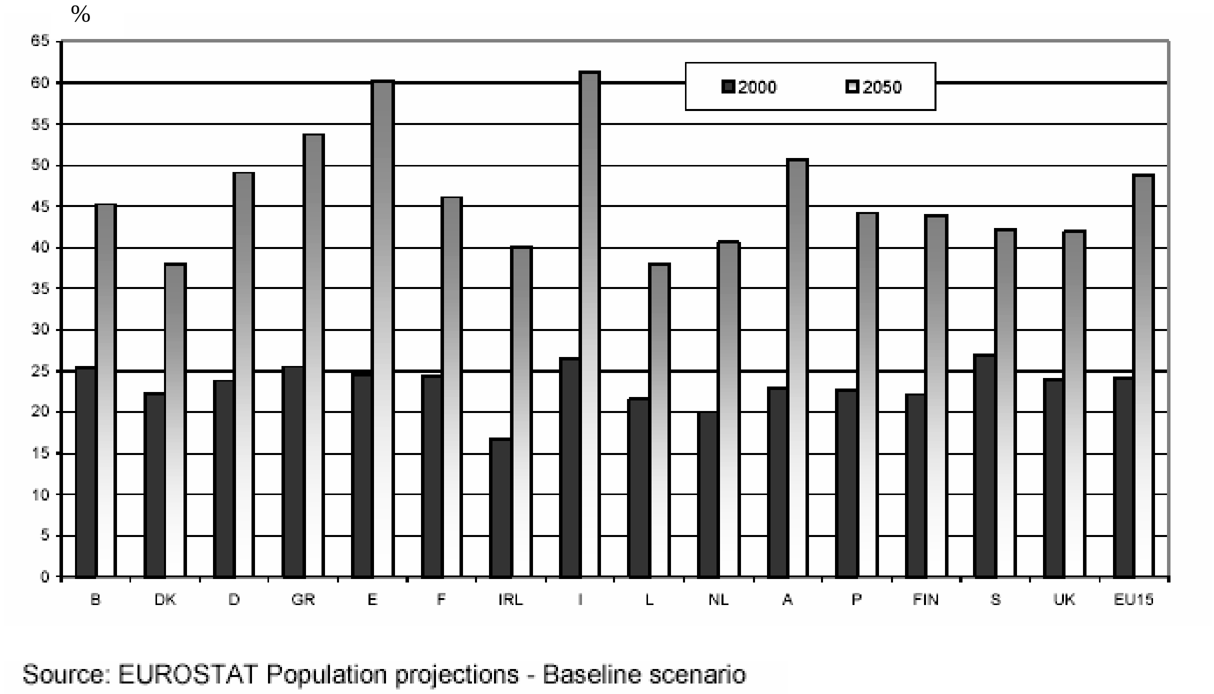
Ageing is one of the greatest social and economic challenges of the 21st century in Europe. Of the world regions, Europe has the highest proportion of population aged 65 or over, with Italy having the highest proportion of people aged 65 or over (18% in 2000), see figure 1. Outside Europe, only Japan has a similar age structure (about 17% of the population is 65 or over in 2000). In Europe, the ratio of persons aged over 65 as a percentage of the working age population 20-64 (the dependency ratio), is expected to increase from about 24% in 2000 to 38% in 2025, and to 49% in 2050 (European Commission, 2000), see figure 2. This increase of the dependency ratio in itself places a heavy financial burden on society through pay-as-you-go financed pension, health and long-term care systems.

Figure 1: Share of Elderly(65+) in Total Population in Europe, 2000



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2002 Revision* and *World Urbanization Prospects*

Figure 2: Old-Age Dependency Ratio, 2000-2050 [1]



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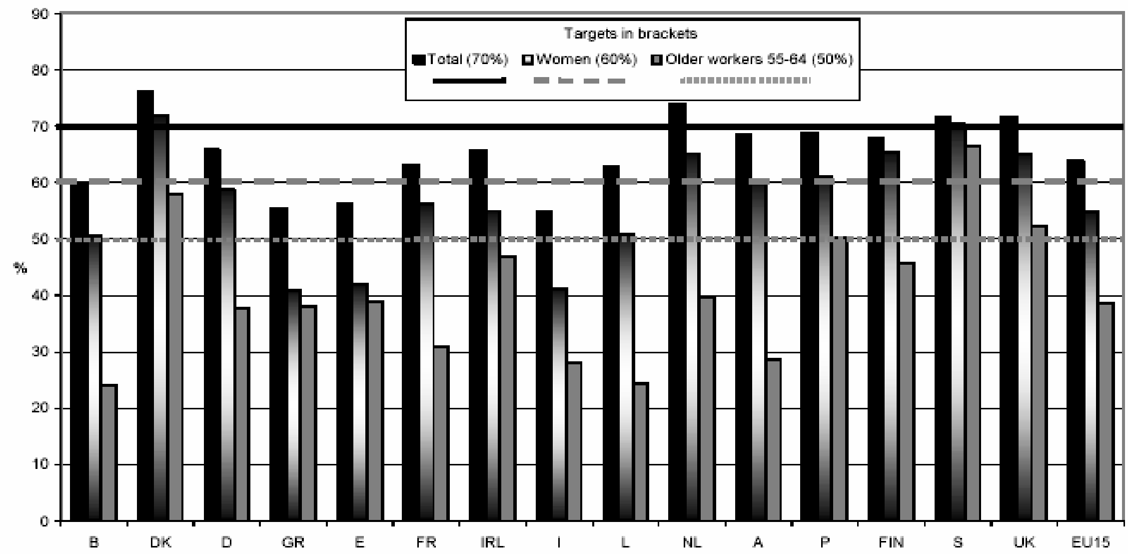
[1] Taken from: www.europa.eu.int/comm/employment_social/soc-prot/pensions/index_en.htm. Dependency ratio of persons aged 65 and over divided by persons 20-64.

There are other pressures on the social security and welfare system as well. Older workers are more likely to be in disability programmes and generally the health care cost of the elderly is substantially higher per capita than of the non-elderly. A special aspect of ageing lies in the increasing number of the oldest old, a population segment with a high prevalence of long-term care needs (Suzman et al, 1992). The ageing of society will cause the number of people on disability or consuming health care to go up.

In addition, Europeans retire much earlier than inhabitants of other developed countries: for instance, in Belgium only a quarter of all males are still in the labour force at age 55-64, (see figure 3, European Commission, 2003) compared to three quarters in Japan (U.S. National Academy of Sciences, 2001). This typically European combination of an ageing population and retirement at ever earlier ages with relatively generous benefits puts very severe strains on our capacity to care for the elderly in the future.

Figure 3: Share of Men Aged 55-64 Still in the Labour Force, 2001



Source: EU-LFS, EUROSTAT

Thus, everything else equal, ageing places a much higher burden on the sustainability of income maintenance systems in Europe than elsewhere in the world, and European public policy – pension policy, health care policy, labour market policy – is challenged in particular. Public policy plays an important role in explaining the differences in health care utilisation or disability insurance across countries (Aarts et al, 1996), public policy appears to be a major factor in explaining the low retirement ages in Europe (Gruber and Wise, 1999), and public policy has strongly shaped savings and wealth patterns across Europe, Japan and the United States (Börsch-Supan, 2003).

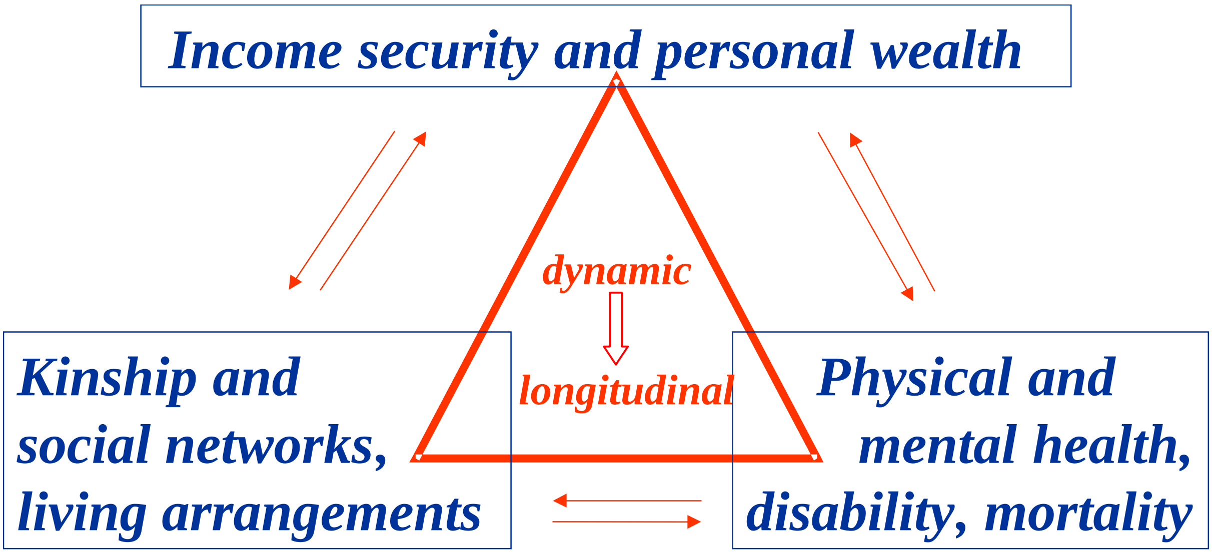
Prepared policy making

To deal with the challenges for public policy posed by the ageing of European societies, one needs to understand the complex interactions among economic, health, psychological and social factors that determine the quality of life of the elderly. These interactions are symbolised by the arrows in figure 4 which link the three corners of the triangle, each representing the three broad fields of economics, health and social networks.

Income and wealth strongly affect health and well-being of the elderly. For example, it is well-known that wealthier persons live considerably longer than poorer persons. The direction of causality, however, is not well understood. Wealthier people may be able to afford more health care and thus remain longer healthy, once older. On the other hand, less healthy people may have been hampered in their earnings ability and career chances, ending up as less wealthy elderly. A better understanding of what causes what under which circumstances will permit us to better target our policy actions.

Another bidirectional link is between health and family/social networks. A “healthy” social environment keeps elderly longer healthy, In turn, health shocks such as a stroke often precipitate a change in living arrangements such as a move to children or into a nursing home. Again, understanding the linkages is important in times of population ageing when the supply of family help (the number of children per elderly) will decline and the demand for state-provided help will increase, straining the financial abilities of the EU member states.

Figure 4: Interactions among economic, health, and social factors in the well-being of the elderly



The triangle is closed by interactions between income security and social environment. On the one hand, a well working social network is a resource also in an economic sense, providing money and in-kind support for the less well-to-do elderly. In turn, income and wealth position are strong determinants of where the elderly will live. Also these linkages are strongly affected by public policy such as income maintenance programs, old-age and disability pensions.

The linkages are dynamic because the elderly age individually (ageing is a process over time, not a state in time). An analysis of the linkages in figure 4 therefore requires a longitudinal point of view, symbolised in the interior of the triangle. Moreover, the institutional frame is changing over time since we observe how the EU member states go through the demographic ageing process and adapt their pension systems, restructure health care policies and labour market regulations accordingly.

An understanding of these dynamic linkages and how they are affected by community and national policies requires multidisciplinary data and research on ageing. In this respect, however, Europe is ill-equipped. While some member states have collected data in specific disciplines at various points in time, there is no Europe-wide longitudinal and multifaceted knowledge base for this crucial challenge of our new century. SHARE, the Survey of Health, Aging and Retirement in Europe, is designed to fill this gap as it collects and analyses such data. Analysing cross-nationally comparable data provides a particularly large added value to the European Community because analysing data on a pan-European level is worth much more than the sum of its national parts. The two main reasons for this are:

First, matters of economic and social policy are increasingly Community matters, due to the increasing personal and capital mobility, precipitating common policies and regulations such as the pension directive. The gradually increasing importance of the method of open co-ordination requires indicators based on reliable and comparable data such as collected in SHARE to assess and guide Community policy.

Second, the enormous diversity in institutional histories, policies, and cultural norms that history has created, represents a unique living laboratory in which the various determinants of the current economic, health and socio-psychological conditions can be understood much easier than in the more homogeneous environment of a single country. A large added value provided by SHARE both to science and to society is to exploit this living European laboratory for the analysis of the elderly's quality of life. The insights gained from analysing and comparing the diversity of experiences will help both a supranational body like the EU and its member countries to prepare more effectively for the continuing changes in age demographics in the future.

Objectives

The main objective of SHARE is to provide a fundamental knowledge base for science and public policy in order to understand and to master the challenges posed by population ageing. Specifically, SHARE aims to create, evaluate and analyse a large-scale pan-European and interdisciplinary household survey of respondents aged 50 and over. The collected data include information on economics, physical and mental health, and social support networks.

SHARE has many accompanying projects, and we use the acronym SHARE (Survey of Health, Aging and Retirement in Europe) for both the entire project bundle and the core project within this bundle. This name-giving core project will collect several preparatory surveys in a selected number of European countries culminating in a prototype survey in Spring 2004 that demonstrates the feasibility and usefulness of such a large-scale cross-national and interdisciplinary survey. This core project is sponsored by the European Commission as part of the 5th framework program. AMANDA (Advanced Multidisciplinary Analysis of Newly Collected Data on Ageing), a second EU-sponsored project under the 5th framework program, will analyse these data, develop prototype indictors for the well-being of the elderly, and perform behavioural analyses. Austria, Belgium and Switzerland are formally part of SHARE but have their own funding as part of several national projects. Finally, a set of accompanying projects are funded by the U.S. National Institute on Aging and provide technical assistance, through the University of Michigan at Ann Arbor, the RAND Corporation at Santa Monica, and the National Bureau of Economic Research at Cambridge, Massachusetts.

Project participants are currently eleven countries ranging from Scandinavia (Sweden, Denmark), Western and Central Europe (France, Belgium, The Netherlands, Germany, Switzerland, Austria) to the Mediterranean (Spain, Italy, Greece). SHARE will be based on best practice technologies in the participating countries. The survey will follow a common set-up across all countries with the goal of collecting data that are strictly comparable to allow cross-country research. Hence, one of the most difficult tasks consist in taking into account differences in language, culture and institutions. Other difficult tasks are of a more technical nature such as developing country-specific feasible sample designs and making use of suitable sampling frames that are already available.

2. Innovation

The main innovation of the SHARE project lies in its multidimensional design which combines interdisciplinarity, cross-national comparability, and longitudinality. Never before has a team from such diverse disciplines collected longitudinal data involving so many countries. SHARE also features many technical innovations designed to maximise cross-national comparability – e.g., the common electronic structure of the survey instrument, and the language management utility, to name just two examples.

Scope and design are a necessary consequence from the SHARE objectives, see figure 4. In order to study the quality of the life of the elderly and how it is affected by the population ageing process and by the various social and economic policies in Europe, one needs multidisciplinary, longitudinal and internationally comparable data:

Multidisciplinary data

- One needs *multidisciplinary data*, for the simple reason that many societal aspects of ageing have a multidisciplinary character (e.g. retirement and health, or financial and health factors determining inflow in disability insurance programmes). To deal with the challenges for public policy posed by the ageing of European societies, one needs to understand the complex interactions among economic, health, psychological and social factors that determine the quality of life of the elderly, and in particular the mechanisms through which policy measures such as pension reform, health care reorganisation and labour market restructuring affect elderly citizens. We know, for instance, that wealthier persons tend to be healthier and live longer than persons who are poorer. But we do not understand well through which channels this link is working and how policy can affect these channels.

Longitudinal data

- One needs *longitudinal data*, because many events associated with ageing are dynamic in nature. For instance, current pensions or social security benefits will usually depend on one's earnings history; current health is partly determined by past behaviour and past health events; accumulated wealth is the result of past savings and investment decisions which in turn depend on expectations about the future. Without longitudinal data one cannot distinguish between age and cohort effects. That is, if we observe differences in for example health, income or wealth between individuals of different age, we cannot ascertain if the difference is simply due to age or due to the fact that the younger person is on a different trajectory than the older person, because of the different life experiences associated with different generations.

Internationally comparative data

- One needs *internationally comparative data* to exploit the rich variety in policies, institutions and other factors across European countries. The impact of public policy can only be understood if we observe one policy in contrast to other policies. Many of the policies that one might want to consider to address future public policy challenges resulting from an ageing population, have already been implemented in some form in at least one of the European countries. Exploiting the variation in institutions across European countries creates a unique *laboratory* in which to study the effects of institutions on societal processes (Gruber and Wise, 1999). For this to work, data must be comparable across countries (e.g. the measurement of disability).

The unique and innovative feature of SHARE lies in the *combination* of these three features. We have interdisciplinary data sets in some countries, notably the English Longitudinal Survey on Ageing (ELSA)[2] and the Health and Retirement Study (HRS)[3] in the United States,

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[2] http://www.natcen.ac.uk/elsa/

[3] http://hrsonline.isr.umich.edu/

the German “Alterssurvey” and the Italian Longitudinal Survey on Ageing. We also have cross-national data sets on single issues, notably the European Community Household Panel (ECHP), its successor, the Survey of Income and Living Conditions (SILC), the European Social Survey (ESS), and the various health surveys collected by the WHO. Some of these data sets are longitudinal (ELSA, HRS and ECHP). The combination of interdisciplinarity and longitudinality has made ELSA and HRS role-models for SHARE.

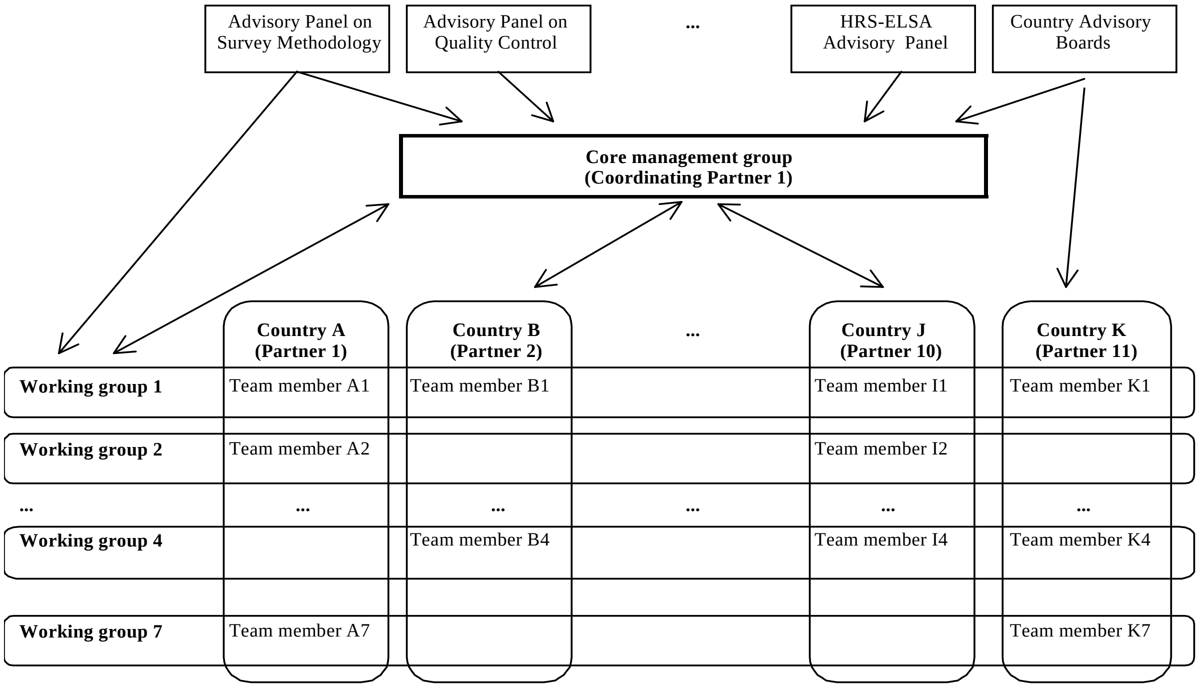
The cross of longitudinality, genuine interdisciplinarity, and a truly cross-national design, however, has not been attempted before. In addition to longitudinality and interdisciplinarity, SHARE is from the beginning designed to meet all country specific institutional and linguistic requirements in a single common design.

3. Participating partners and organisational structure

Eleven countries ranging from Scandinavia (Sweden, Denmark), Western and Central Europe (France, Belgium, The Netherlands, Germany, Switzerland, Austria) to the Mediterranean (Spain, Italy, Greece) participate currently in SHARE. We have assembled teams of first-rate researchers in demography, economics, epidemiology, psychology, sociology, statistics, and survey design from these and other countries. Currently, about 130 researchers are directly involved in the SHARE project.

These researchers are organised in multidisciplinary country teams and cross-national working groups (“matrix organisation”), assisted by a number of expert support and advisory teams. Each researcher belongs to both a country team and a working group. The organisational structure is summarised in figure 5:

Figure 5: Matrix structure of SHARE working groups and country teams.



Team member A1 comes from country A and is an expert in field 1. This team member therefore is a member of country team A and working group 1. Ideally, each country is represented in all working groups. This is not always feasible, explaining some empty cells in the matrix. Multidisciplinary country team A consists of researchers A1, A2, ..., and A7. In turn, the cross-national working group 1 consists of researchers A1, B1, ..., I1 and K1.

In addition to the matrix of country teams and working groups, the SHARE structure involves a core management group, advisory boards and support groups. The division of labour is as follows:

Core management group and Co-ordination team

A ***core management group*** supervises the entire project. It is led by the ***co-ordinator***, Axel Börsch-Supan, economist at Mannheim University. The overall direction of the project will be carried out by the co-ordinator in collaboration with the core management group which consists of internationally-respected senior experts in their fields (Agar Brugiavini, economist at the University of Venice, Arie Kapteyn, economist at Tilburg University and RAND, Stefania Maggi, epidemiologist at the University of Padua, Sir Michael Marmot, public health expert and sociologist at University College London, James Nazroo, sociologist at University College London, and Jean-Marie Robine, epidemiologist at INSERM, Montpellier). The core management group settles potential disagreements among country teams and working groups or between a country team and a working group.

The co-ordinator is aided by a ***co-ordination team*** which is based in Mannheim, Germany. It ensures overall quality and cross-national comparability; co-ordinates the development of the questionnaire modules; and co-ordinates and participates in all crucial negotiations. The team consists of Hendrik Jürges, Marie-Louise Kemperman and Oliver Lipps.

Country teams

The country teams are responsible to conduct the project in all of its phases in their respective countries. In particular, they negotiate with the survey agencies to conduct the national survey, manage the translations, participate in the training process to motivate the interviewers and oversee the fieldwork . The country teams are also responsible to make sure that the survey does justice to country-specific institutions (such as health care and pension system) and follows country-specific legal requirements (such as data confidentiality).

The country teams are led by the following country team leaders (CTL):

- **Austria:** Rudolf Winter-Ebmer
- **Belgium:** Pierre Pestieau
- **Denmark:** Martin Browning
- **France:** Thierry Magnac
- **Germany:** Axel Börsch-Supan
- **Greece:** Antigine Lyberaki
- **Italy:** Guglielmo Weber
- **Netherlands:** Arthur van Soest
- **Spain:** Manuel Arellano
- **Sweden:** Anders Klevmarken
- **Switzerland:** Alberto Holly

The country team leaders' institutions are the formal partners of the SHARE consortium under the 5th framework program of the European Commission.

Working groups

The task-oriented cross-national working groups consist of those members in each country team who are specialists in the field of the working group. The working groups design the questionnaire modules, conduct response analyses during the development process and modify the questionnaires accordingly. The working group leaders (WGL) are leading specialists in their fields. The composition and leadership of each working group is determined by the co-ordinator. Eleven working groups will produce the questionnaire design and write up subject-specific parts of the final report on a design of SHARE. These working groups and their leaders are:

- **Physical health:** Johan Mackenbach
- **Mental health and cognitive functioning:** Martin Prince
- **Well-being:** Johannes Siegrist
- **Oldest Old:** Kaare Christensen
- **Saving and assets:** Tullio Jappelli
- **Consumption:** Martin Browning
- **Labour force participation, income and pension rights:** Agar Brugiavini
- **Expectations:** Luigi Guiso
- **Family and social networks:** Martin Kohli
- **Intergenerational transfers:** Claudine Attias-Donfut
- **Health care systems and health service utilisation:** Brigitte Santos-Eggimann

In addition, three working groups address methodological issues and write up the methodological parts of the final report on a design of SHARE:

- **Cross-national survey design:** Anders Klevmarken
- **Data base management and data validation:** Arthur van Soest
- **Preliminary response analysis:** Franco Peracchi

Advisory panels

In order to draw from the best experience available, several advisory and review panels have been set up. We have engaged a formal review panel in parallel to the EU-initiated midterm review. There are several ad hoc advisory panels on overarching issues such as survey methodology, quality control, and data management and dissemination. Furthermore, SHARE is supported by an advisory group consisting of leading researchers of the US HRS and the UK ELSA.

Support teams

The co-ordination team is aided by four expert support teams. Their tasks and responsibilities are:

- **CentERdata**[4] (Tilburg, NL) is responsible for the technical implementation of the CAPI questionnaire including the translation tool, and works out the data and sample management system, collects the data centrally and runs preliminary checks.
- The **Social Research Centre**[5] (SRC, Ann Arbor, USA) designs a centralised “train-the-trainers” program, monitors fielding protocols and provides trouble-shooting consultation.
- The **Centre for Survey Research and Methodology**[6] (ZUMA, Mannheim, Germany): designs the framework for the model contracts and negotiation procedures and produces guidelines for the translation process and design-problem handling procedures.
- The **National Centre for Social Research**[7] (NatCen, London, UK) has conducted the first pilot of SHARE in the September of 2002, and has advised in the improvement of the questionnaire as result of this pilot. NatCen now serves as the main link between ELSA and SHARE.

4. Questionnaire Content and Questionnaire Design

Data to be collected will include *health variables* (e.g. self-reported health, physical functioning, cognitive functioning, health behaviour, use of health care facilities), *psychological variables* (e.g. psychological health, well-being, life satisfaction, control beliefs), *economic variables* (e.g. current work activity, job characteristics, job flexibility, opportunities to work past retirement age, employment history, pension rights, sources and composition of current income, wealth and consumption, housing, education), *social support variables* (e.g. assistance within families, transfers of income and assets, social networks, volunteer activities, time use).

All data will be collected by face-to-face, computer-aided personal interviews (CAPI), supplemented by a self-completion (“drop off”) paper and pencil section. The generic survey instrument is written in English as a computer program in the Blaise language. In each

[4] http://cdata4.uvt.nl/eng/index

[5] http://www.isr.umich.edu/src/

[6] http://www.gesis.org/en/zuma/index.htm

[7] http://www.natcen.ac.uk/

country or region, the English text is replaced with text in its own language. All texts are stored in a data base that can be accessed for translation and editing by a “language management utility” (LMU). Since these texts are filled into the Blaise CAPI-program, the structure of the survey instrument is not affected by the language; all survey instruments are identical. This innovation is one of the mechanisms to ascertain cross-national comparability. Another such mechanism is control translation, managed by ZUMA, of selected text items.

Questionnaire modules

The survey instrument is structured in modules. The current set of modules is listed in figure 6, together with the persons in the households who are answering each module.

Figure 6: Modules of SHARE questionnaire

Module	Name	All Respondents	Financial Respondent	Housing Respondent	Family Respondent
CV	Coverscreen				
DN	Demographics	x			
PH	Physical Health	x			
BR	Behavioural Risks	x			
CF	Cognitive Function	x			
MH	Mental Health	x			
HC	Health Care	x			
EP	Employment and Pensions	x			
GS	Grip Strength	x			
WS	Walking Speed	x			
CH	Children				x
SP	Social Support	x			x
FT	Financial Transfers		x		
HO	Housing			x	
HH	Household Income			x	
CO	Consumption			x	
AS	Assets		x		
EX	Expectations	x			
IV	Interviewer Observations				

Respondents

Respondents are all household members aged 50 and over, plus their spouses, independent of age. Example: Anna is 52 years old. She lives together with her husband Bert of age 49 and her daughter Cecilia (age 17). In the same household lives also Bert's mother Dorothy who is of age 70. SHARE will interview Anna, Bert and Dorothy.

In order to save time and avoid duplications, some parts of the questionnaire need only be answered by one respondent in a household or couple, respectively. Questions on housing and housing finances should be answered by the household member who is most knowledgeable in housing matters ("housing respondent"). Questions about finances need be answered by one person in a couple only, again preferably by the partner who is most knowledgeable ("financial respondent"). If a couple keeps their finances completely separate, each partner will be treated as separate financial unit and each will answer his/her own questions on finances.

A single-person interview is designed to take 80 minutes while the interview length for a couple is about 120 minutes.

Description of modules

In the following, each module of the questionnaire is described, in the order in which they appear in the questionnaire. The current version of the questionnaire is available on www.SHARE-project.org.

Coverscreen: The interview starts with a "coverscreen" that provides an introduction to the study and contains the statement of confidentiality. The coverscreen collects basic demographic information about everyone who currently lives in the household (name, gender, birth year and month, relationship to informant, and whether married or living with someone as married). It establishes whether household members are eligible for a SHARE interview and who is going to be the housing, financial, and family respondent. This section only needs to be completed by one person in each household, the "informant".

Demographics: This module collects details about each respondent's marital status, country of birth, education, and occupation. It also collects selected details about parents such as their last occupation, health status, and frequency of contact.

Physical Health: This module covers many different aspects of people's health; self-reported general health, longstanding illness or disability, eyesight and hearing, specific diagnoses and symptoms, pain, and difficulties with a range of activities of daily living.

Behavioural Risks: This module collects information on health behaviours such as smoking, alcohol use, and physical activities.

Cognitive function: This module contains subjective and objective measures of four aspects of the respondent’s cognitive functioning: literacy, numeracy, memory, and verbal fluency.

Mental Health: This module asks how the respondent views his or her life and collects information about emotional problems.

Health Care: This module asks about recent doctor visits and hospital stays. It also contains questions about the respondent's level of health insurance.

Employment and Pensions: This module collects information about respondents’ current work activities, their income from work and other sources, and any current or past pensions that they may be entitled to. For respondents who have retired and are receiving a pension, we ask about the number and kind of pensions and how much they receive.

Grip Strength: This type of physical measurement involves recording the respondent's maximum handgrip strength with the aid of a dynamometer.

Walking Speed: This type of physical measurement involves asking the respondent to walk a certain distance and measuring the time it takes for the respondent to complete this activity. Only persons of age 65+ are asked to perform this test

Children: This module collects information about the respondents’ children.

Social Support: This module collects information about any help the respondents might receive from family and other people not living in the household and how household members help others. Questions on most kinds of help received by members of a couple are asked of the family respondent.

Financial Transfers: This module asks the "financial respondent" about any regular financial transfers and payments the respondent(s) may have given or received from non-household members. It also asks about inheritances.

Housing: This module collects information about the respondents’ current housing situation, including the size and quality of the accommodation. Owners are asked about the value of their property and, depending on the individuals’ tenure, questions are asked about mortgages and rent payments. The section on housing is asked of one person per household, regardless of how many people are eligible for the interview.

Household Income: This module collects summary measures of the household income from various sources.

Consumption: This module asks about various types of household expenditures, e.g. on food, fuel, electricity, and telephone. It is answered by the “housing” respondent.

Assets: This module asks about the amount of financial and non-financial assets held in various forms and income from these assets. This section will be completed by one person in each financial unit (the "financial respondent"). A financial unit is defined as either a single person or a couple, so in most couples only one of them will complete the sections on assets on behalf of both of them.

Expectations: This module explores people’s expectations, the level of certainty they feel about the future, and how they value risk and make financial decisions within their household.

Interviewer Observations: This module concerns the interviewing experience and should be answered by the interviewer as soon as possible after the interview. These questions are important in understanding the circumstances surrounding the interview and can sometimes help researchers clarify any confusing or conflicting information. Included are e.g. information of background interview characteristics, third persons present, time and day, atmosphere, area, housing, household characteristics, etc.

5. The Development Process

Core of the SHARE development process is the iteration between *questionnaire development* and *data collection*. Point of departure was the US HRS (Health and Retirement Survey), the UK ELSA (English Longitudinal Survey of Ageing) and similar other survey instruments (e.g., in Germany, Italy and Sweden) which have addressed relevant questions.

The development process is taking place in four stages:

Stage 1: Initial questionnaire design in English language

In the first stage, completed by now, the working groups produced an English-language draft questionnaire. The entire group met in plenary sessions during this process to test ideas and ensured that the proposed questions are likely to be viable in all participating countries.

The first stage culminated in an English-language pilot which took place in the UK in September 2002. The main purpose of this pilot was to test the feasibility of the survey instrument and the CAPI program. It was based on a quota sample: 40 households had at least one respondent aged 50-70, 40 households had at least one respondent aged 71-85, and 10 households had at least one respondent aged 86+. 30 households contained at least one respondent who was working; and single/couple or composite households were equally frequent. The pilot was conducted by the National Centre for Social Research (London) which has also conducted the first wave of ELSA. The aim of this pilot was to test the English language questionnaire, explore its length and non-response frequencies for various household types, and collect interviewer feedback.

Stage 2: Development of multi-language instrument

Based on the lessons from this UK-pilot, the English-language questionnaire was thoroughly revised. The next stage consisted of an array of cognitive interviews in selected countries based on the English-language questionnaire in order to test the international feasibility of the generic instrument. After an additional round of revisions, a translation tool (the "language management utility", LMU) was developed by CentERdata to enforce the comparability of all national translations with the generic English-language questionnaire. This tool is also used to keep track of necessary further adaptations to each country's institutions and circumstances.

The translation tool and the translated questionnaires were tested in two countries, Germany and Italy. This test runs resulted in another round of improvements of tools and instrument, before the English version was translated in all SHARE languages. Languages include language variants who are treated separately, such as Belgian French and Swiss German.

The second stage culminated in a first pilot simultaneously in all SHARE countries, using quota samples (n = 50 households, some 75 persons) similar to the UK-Pilot in stage one. These interviews were conducted in June 2003 and aimed at testing whether the questions are understood and answered as intended in each country, along with measuring the duration of the different modules, and ensuring the functioning of the sample management system.

Stage 3: Development of multi-language sampling frame

In the next stage, after further refinements of the instrument, now version 6, available on the www.share-project.org website, the full questionnaire using random samples (n = 100 primary respondents per country plus their spouses) will be fielded in January/February 2004. Aim is to allow predictions to be made of the reliability and validity of the full questionnaire, including more "problematic" respondents than are to be expected using a quota sample. In addition, this pre-test should also test the country-specific procedures to achieve a probability sample.

An extensive statistical analysis of the pilot results will be performed to assess the reliability and validity of the questions. Using data from the testing interviews, the pilot results and past data, these will suggest improvements to questions, and assist in the design of the final questionnaire.

Stage 4: Running the prototype "main test survey"

The last stage will consist of a medium-scale survey of this final questionnaire (planned n = 1500 primary respondents per country plus their spouses, totalling some 22.000 respondents), scheduled for Spring/Summer 2004. This stage will be the essential step to demonstrate the feasibility and the usefulness of SHARE, in that it permits substantive data analysis addressing the main questions of interest. This "main test survey" will deliver a prototype for the planned multi-year panel, and should serve as a demonstration object to the European Commission.

Project schedule

Table 7 lists the major tasks, meetings and milestones of the SHARE project. It shows the complexity of the project and depicts how the different working groups (WGs) and country teams (CTs) depend on each other.

Table 7: SHARE project schedule

Responsible	**Date**	**Task**
All	**1. Jan. 2002**	**SHARE project begins; formation of WGs and CTs**
WGs	Due 15. March	Draft paper versions of module contents due
All	March 2002	SHARE conference in Madrid, draft of questionnaire discussed, questionnaire and module length fixed
WGs	Due 30. June	Version 1 questionnaire modules due
CentERdata	Due 20. July	Version 1 CAPI instrument due
MEA, NatCen	August 2002	Testing, Corrections: Generate version 2 survey instrument
MEA, NatCen	**Sept. 2002**	**UK-PILOT: First test of whole questionnaire (version 2), quota Sample (100 HH) in the UK**
All	5-6. Oct. 2002	SHARE conference in Copenhagen to discuss UK-pilot results and draw consequences for questionnaire revision.
WGs	Due 7. Nov	1st draft of updated modules

WGs	Due 30. Nov	2nd draft after feedback with SRC and NatCen
MEA	1-15. Dec	(Minor) editing in cooperation with WGs: version 3
SRC, ZUMA	15. Dec-15. Jan	Cognitive interviews in Danish, French, German, Italian
CTLs	18. Dec. 2002	SHARE CTL meeting in Frankfurt on organisational issues.
All	**1. Jan. 2003**	**AMANDA project begins: Analysis of pilot data**
CentERdata	Due 15. Jan	Programming of survey instrument version 3, some testing
All	15.-30. Jan	Testing (CTLs: does it fit your country requirements?)
MEA	31. Jan	Collect and merge feedback from testing: version 4
CentERdata	Due 31. Jan	Translation tool (1st version)
CentERdata	1.-15. Feb	Programming of survey instrument version 4, some testing
NatCen, SRC	16.-28. Feb	Mock interviews in UK and US
GE, IT	1.-28. Feb	Translation of version 4 into German and Italian
GE, IT	1.-10. March	Mock interviews in Germany and Italy
All	14/15. March	SHARE conference in Edesheim (experiences with translation, procedures for translation and survey agency selection)
MEA/CentER	16.-31. March	Finalise English survey instrument: version 5
CentERdata	Due 31. March	Translation tool (2nd version)
All countries	1.-30. April	Translation of version 5 into all member languages
CentERdata	Due 30. April	Sample Management System/Interface
MEA/CentER	1.-15. May	Edit multilingual survey instrument (freeze for training)
All	15.-31. May	Testing of multilingual instrument, minor revisions
CTLs/CentER	Due 31. May	Coordination of sample management systems in all countries
All CTLs, all survey agencies	30/31. May	SHARE meeting in Venice (preparation of pilot 2, train-the-trainer program I)
CTLs	**10-30. June**	**ALL-COUNTRY PILOT (quota sample, some 50 HHs in each country)**
CTLs, WGLs	1.July-31.Aug	Analyse pilot data (as part of AMANDA)
All	4.-7. Sept 2003	SHARE/AMANDA conference in Edesheim (analysis of pilot, sampling coordination)
All	Sept, Oct, Nov.	Revisions, testing, update translation (versions 6 and 7)
All CTLs, all survey agencies	18./19. Dec. 2003	SHARE meeting in Mannheim (preparation of pre-test, train-the-trainer program II)
CTLs	**15.Jan – 29.Feb 2004**	**PRE-TEST (random sample, some 100 HHs per country)**

All	18.-20. March 2004	SHARE/AMANDA conference in Crete (analysis of pre-test data, analysis of sampling issues, proxy handling)
All	Due 5. April	Revisions (sampling procedures; minimal for instrument)
CTLs	5. April	Begin telephone screening for main test survey (version 8)
All CTLs, all survey agencies	April 2004	SHARE meeting in Mannheim (preparation of main test survey, train-the-trainer program III)
CTLs	**20. Apr - 30. June**	**MAIN TEST SURVEY (random sample, some 1500 HHs in each country, final size depending on funds)**
CTLs	1. July-30. Sept	Overflow time for completing interviews if necessary
All	1. July-30. Sept	Preliminary response analysis (as part of SHARE)
All	from July 2004	Start with substantive analysis (as part of AMANDA)
All	Oct-Dec. 2004	Prepare SHARE papers and final report of SHARE to EU
All	**31. Dec. 2004**	**SHARE ends, AMANDA continues with data analysis**

6. Fieldwork Procedures

It is crucial in SHARE to ensure consistency of methods and fieldwork procedures across countries in order to obtain a genuinely comparable cross-national survey of high quality. This section summarises the main elements by which SHARE enforces cross-national comparability and high quality standards.[8]

Objectives

The first objective of tight fieldwork procedures is to achieve high data quality, such as high response and low non-contact rates. For this reason, SHARE has selected most reputable survey agencies capable of carrying out data collection for this complex study. In all countries, the agencies must sign a common standard contract, along with country specific specifications. In order to provide common standards, our second and equally important objective, a member of the SHARE co-ordination team and a member of the working group on cross-national survey design must be involved in all the crucial negotiations, and detailed written standards have to be adhered to.

Basic interview characteristics

The target population consists of all persons aged 50 and over ("age eligible") plus their (possibly younger) partners. The sample is based on residents, not on citizens. It is person, not household-based. Persons who live in an institution are not explicitly excluded, although we will limit interviews in institutions to a few selected cases during the test phase.

The SHARE survey is a face-to-face, computer-aided personal interview (CAPI) which contains closed and open questions as well as several physical and mental health tests. It is supplemented by a self completion paper and pencil questionnaire. The CAPI is centrally programmed in BLAISE. The program is augmented by a unique sample management and data transmission system also provided by SHARE. During the interview, frequent usage of showcards is made. The CAPI program will prompt the interviewer when to hand out the self-completion questionnaire to the respondent. The interview length depends on the household size, and is supposed to range from around 80 minutes in a one-person household to around 120 minutes in a couple HH. On average, the interview is expected to take around 100 minutes.

[8] See Lipps (2002) for details.

The self completion questionnaire contains additional questions in the areas of mental and physical health, health care, and social networks. Where physical and cognitive limitations make it too difficult for a selected respondent to complete the interview himself or herself, it is planned to conduct proxy interviews in the pre-test and main test surveys.

Keeping track of contacts and non-response

Contact data which are collected at all interactions with respondents, informants, and gatekeepers are sent to CentERdata. Contacts, response and non-response outcomes are recorded, calculated and keyed according to a pre-specified standard format, which includes at least the mutually exclusive categories listed below, which are part of the sample management system provided by SHARE:

- Number of total issued and contacted addresses (or other sample units) and mode, time and date of contact and - if applicable - date of appointments for the interview
- Mode, time, and date of all contact attempts. After at least four personal visits with no contacts, including at least one call in the evening and at least one at the weekend, details of the attempts must be delivered to the survey agency, including observable area, stratum, dwelling and housing conditions, information about moving or deceased, where possible. The agency then has to take appropriate measures.
- Number, time, and date of household and target respondent refusal (if applicable) classified into standard categories (including where possible details of gender, age-bands)
- Number of respondents who are too ill or otherwise incapable (e.g. language problems) or not available, split into temporarily and permanently, if possible.
- Number, time, and date of achieved interviews, started and still to be completed, and started but not to be completed interviews.
- Number, time, and date of collected drop off questionnaires.

These data are used to compute the following key statistics:

- Household – non-response
- Person – non-response (unit-non-response, by a set of pre-specified reasons, see below)
- Break-off during the interview by specific persons
- Item – non-response by person

In addition, reports are regularly submitted on costs and verification efforts, plus regular frequency lists of key variables. The country team leaders review the timing, breakout and frequency of the reports together with the SHARE co-ordinator.

Probability samples

Samples for the pre-test and the main survey are full probability samples. The sampling frames will differ according to availability in different countries. It is the responsibility of the

CTL to construct together with the survey agency a sample design that is at the same time suitable for this country and compatible with all other SHARE sampling designs. All country-specific sampling procedures and the sampling process has to be approved by the SHARE co-ordination team and the SHARE working group on cross-national survey design. The addresses used in the main test survey will remain (co-)property of SHARE, such that re-interviewing in a future wave is feasible.

Quota sampling is not permissible for the pre-test and the main test survey. No oversampling by age or other socio-demographic characteristics is planned. The sampling frame (if existing and generally accepted) or sampling units at different stages, including the degree of clustering and the data base used for the selection of communities as well as stratification factors applied to the sampling frame, will be described in detail in the final report, detailing the following:

- The process of the household selection from a multi-household (or multi-individual) address has to be spelled out in detail by the agency and agreed in advance, before signing the contract.
- The selection probabilities of every sample household and every sample member must be estimated and recorded after the survey.
- The remaining systematic non-coverage problems (telephone sample coverage, language minorities, other impairments, e.g. a high rate of illiteracy) must be recorded.

Interviewer training

Training is the key to a successful survey. Hence, SHARE pays a lot of attention to interviewer training. This includes both technical aspects and motivation. The interviewers are trained personally by the survey agency and the CTL, who in turn is trained using the “train-the-trainer” materials provided by SRC. Participation of the CTL at all training meetings is crucial for the motivation of the interviewers and the quality of the content.

Fieldwork monitoring

SHARE will closely monitor the fieldwork progress during the pre-test and main test survey. This includes producing a weekly report on response rates, broken down by categories similar to those listed above. All survey agency must accept quality control back-checks (e.g. contacting interviewed households by the agency to ensure that interview actually took place, acceptance of visits by CTL/co-ordinator, acceptance of code of ethics). The survey agency sends the raw data on a weekly basis directly to CentERdata (i.e. without editing) by electronic means. In case of interviews with errors, these may be sent back to the field for correction.

Debriefing sessions

After each survey, survey agencies hold “debriefing” meetings with their interviewers, the CTL and, possibly, members of the SHARE co-ordination team in which interviewers report on their experiences during the fieldwork. The debriefing meetings after the UK and the all-country pilots were very successful in showing where such a complex survey needs improvement and revision to become efficient for the interviewer and pleasant for the respondent.

7. Current State of Project

This section describes the state of the project as of 30 June 2003.

Formation of organisational structure

At the beginning of the project in January 2002, 14 *working groups* have been formed which are responsible for the development of modules of the common questionnaire, and 9 *country teams* for the selection and control of survey agencies and for the sample design in the various countries. The total number of researchers involved in either a working group or a country team is about 120. In addition, we have formed the core management group, which is the main guiding body of the project. In addition to the co-ordinator, it has six well-known and experienced members (Agar Brugiavini, Arie Kapteyn, Stefania Maggi, Sir Michael Marmot, James Nazroo, and Jean-Marie Robine). Finally, we have assembled various ad hoc advisory committees, notably the HRS advisory group (led by Michael Hurd and Robert Willis, the current principal investigators of the US Health and Retirement Survey), the ELSA advisory group (led by Richard Blundell and James Banks, the current principal investigators of the English Longitudinal Study on Ageing), and the Survey Instrument Review Board (Norbert Schwarz, University of Michigan; Jonathan Skinner, Dartmouth College; Beth Soldo, University of Pennsylvania; Clemens Tesch-Römer, DZA, Berlin; John Rust, University of Maryland). Finally, we have invited outside observers on all conferences as discussants, among them Nobel laureates Dan McFadden and Danny Kahnemann.

Initial instrument development

Core of the workplan in the first year was the iteration between questionnaire development and preliminary data collection. The substantive work of the questionnaire development has been performed by the cross-national working groups consisting of specialists in their fields. Eleven working groups have designed interview modules. Their point of departure was the

US HRS, the UK ELSA and other survey instruments (existing instruments in Germany, Italy and Sweden). By June 2002, they had assembled first drafts of the interview modules which were converted in Mannheim and Tilburg to the *1st version of the English-language draft questionnaire*. We have tested various aspects of this draft questionnaire over the summer of 2002. Most notably, we have tested various ways in which to ascertain notoriously hard economic questions (such as assets and wealth). We have tried out cognitive aspects and framing effects.

The UK-Pilot

The results have produced the *2nd version of the English-language draft questionnaire*. This version has been programmed by CentERdata in Tilburg to a fully functional CAPI (Computer-Aided Personal Interview) survey instrument in the Blaise language. In September 2002, we have piloted this instrument on some 100 British households representative of our sample (age range 50-96). This pilot was a great success, since item non-response rates were low and the willingness to participate high. We attribute this success to great care in interviewer training and motivation, and the timeliness and relevance of the questions asked to economic and social policy. As a major innovation, we introduced the grip strength measure of physical health in a general-purpose social survey with great acceptance by the respondents. In the UK pilot, only 6 percent of all respondents (aged 50-96) and 12 percent of those above 80 were unable to take the test. This success has convinced both HRS and ELSA to follow our approach in health measurement.

At the end of the year 2002, we have produced the *3rd version of the English-language draft questionnaire*, learning from the UK pilot experience. This instrument has been published and can be accessed via Internet on the SHARE website. It can be used as paper version (in two display variants) and as an executable file that can be run on any Windows-based PC to simulate a real interview situation.

The all-country pilot

During the Spring of 2002, versions 4 and 5 of the questionnaire were developed with the help of additional focus-group interviews in the UK, US, Germany and Italy. These updated and improved survey instruments were translated in all SHARE languages during April 2002.

These translated instruments (version 5) are the basis for first the all-country pilot. This pilot is currently in the field, simultaneously in almost all SHARE countries. We expect to get valuable feedback about the cross country feasibility of the questionnaire and the performance of the CAPI BLASE.

Additional support

We have mustered additional support from the National Centre for Social Research (London) who ran the UK pilot; from the Survey Research Center at the University of Michigan in Ann Arbor who designed a “train-the-trainer” program, sponsored by the US National Institute on Aging, and helped process design; from ZUMA in Mannheim, who designed survey agency selection procedures; and, most crucially, from CentERdata in Tilburg, who developed and programmed the Blaise survey instrument. The development of the multi-language CAPI instrument was a major achievement; elements of the design are being considered by ELSA and HRS for a retooling of their instruments. Another technical innovation is the *translation tool* that enforces identical routing and framing of all questions in all countries and languages.

Meetings and conferences

The team leaders have met in plenary sessions three times during this process to co-ordinate contents (March 2002: Madrid; October 2002: Copenhagen; March 2003: Edesheim). An organisational meeting was held end of 2002 in Frankfurt, and the first train-the-trainer session in May 2003 in Venice. In addition, many working group meetings have taken place, organised de-centrally by the working group leaders, and country team meetings, organised by the country team leaders, including national training sessions shortly before the all-country pilot in June 2003.

Dissemination

We have disseminated our progress in a multitude of presentations and seminars. Moreover, we have posted results, drafts of questionnaires, timelines and deadlines, milestones and deliverables on the Internet site www.share-project.org to facilitate information sharing and feedback. We also have facilitated an open structure which has allowed many external researchers to participate. This has led to a submission to the German Israeli Foundation (GIF) for an Israeli SHARE (currently under revision), to a successful submission to the Austrian National Fund for an Austrian SHARE and a parallel successful effort for a Belgian SHARE, two countries.

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